In re Application of GEIDL et al.
Serial No. 09/909,416

LISTING OF THE CLAIMS:

1.   (original)   In a computing device, a system comprising:

an input device configured to receive handwriting input and convert the handwriting input to electronic ink information;

a mechanism configured to provide an object to maintain electronic ink data that corresponds to the electronic ink information, the object having at least one interface;

executable code associated with the object and comprising functionality arranged to interpret the electronic ink data and output a representation of the electronic ink data therefrom; and

a software module that invokes the functionality of the object via the at least one interface to cause the object to interpret the electronic ink data to output the representation.

2.   (original)   The system of claim 1 wherein the input device comprises a tablet.

3.   (original)   The system of claim 1 further comprising a display device, wherein the object outputs the representation of the electronic ink data as a visual image to the display device.

4.   (original)   The system of claim 1 wherein the software module comprises an application program, and wherein the functionality is further arranged to enable the application program to control the output of the representation.

2

In re Application of GEIDL et al.
Serial No. 09/909,416

5.   (original)   The system of claim 4 wherein the output comprises a displayed image,

and wherein the application program controls the output by requesting a particular representation of the

displayed image.

6.   (original)   The system of claim 1 wherein the output comprises a displayed image,

and wherein the object includes additional data and functionality for adjusting the image appearance to

correspond to information displayed relative to the image.

7.   (original)   The system of claim 1 further comprising a handwriting recognizer that

converts electronic ink information to other information, and wherein the object maintains at least

some results from the handwriting recognizer.

8.   (original)   The system of claim 1 wherein the object is further associated with

functionality comprising, a method directed to performing at least one of the following operations:

editing, formatting and searching.

9.   (original)   The system of claim 1 wherein the object is further associated with

functionality comprising, a method directed to performing at least one of the following operations:

combining multiple objects into a single object, and separating a single object into multiple objects.

10.   (original)   The system of claim 1 further comprising, a handwriting recognizer that

converts electronic ink information to words, and wherein the object represents a single word.

3

In re Application of GEIDL et al.
Serial No. 09/909,416

11.   (original)   The system of claim 1 wherein the object includes additional data

comprising at least one of the following types of data: normalization data, previous object

identification data, and next object identification data.

12.   (original)   A method for providing electronic ink to an application for display

thereof, comprising:

receiving electronic ink data;

creating an electronic ink object for maintaining information that corresponds to the electronic

ink data, the object having ink-related functionality associated therewith including a method that when

called interprets the electronic ink data and renders an image of the ink data therefrom;

embedding the object into a document that has data therein arranged in a format used by the

application; and

providing an interface to the application to call the method, the application calling the method

via the interface to render the image of the ink data.

13.   (original)   The method of claim 12 further comprising, normalizing the received

electronic ink data into the information that corresponds to the electronic ink data.

14.   (original)   The method of claim 13 further comprising, maintaining normalizing

information with the electronic ink object.

4

In re Application of GEIDL et al.
Serial No. 09/909,416

15.   (original)   The method of claim 12 further comprising, providing the electronic ink

data to a recognizer, and receiving a recognition result therefrom.

16.   (original)   The method of claim 12 wherein the recognition result includes at least

one text word alternate, and further comprising, maintaining the at least one text word alternate with

the electronic ink object.

17.   (original)   The method of claim 12 wherein the recognition result includes baseline

information, and further comprising, maintaining the baseline information with the electronic ink

object.

18.   (original)   The method of claim 17 wherein the image is rendered based on the

baseline information.

19.   (original)   The method of claim 12 wherein the image is rendered at a location that

is relative to text in the document.

20.   (original)   The method of claim 19 wherein the electronic ink has a baseline

associated therewith that is maintained in the object, and wherein the image is rendered at the location

that is relative to the text in the document by aligning the image with the text via the baseline.

5

In re Application of GEIDL et al.
Serial No. 09/909,416

21.   (original)   The method of claim 12 wherein the image is rendered with a size that is relative to text in the document.

22.   (original)   The method of claim 21 wherein the electronic ink has a baseline and a midline associated therewith, and wherein the size is determined based on the baseline and midline.

23.   (original)   The method of claim 21 wherein the electronic ink has a ceiling associated therewith, and further comprising, determining whether the electronic ink data includes an ascender that ascends above the ceiling, and if so, scaling the ascender to not ascend above the ceiling.

24.   (original)   The method of claim 21 wherein the electronic ink has a floor associated therewith, and further comprising, determining whether the electronic ink data includes a descender that descends below the floor, and if so, scaling the descender to not descend below the floor.

25.   (original)   The method of claim 12 wherein embedding the object comprises, pasting the object into the document.

26.   (original)   The method of claim 12 further comprising, exposing an interface to the application including a method to enable the application to format the ink data, receiving a call to that method including formatting parameter data, and modifying the image based on the formatting parameter data.

6

In re Application of GEIDL et al.
Serial No. 09/909,416

27.   (original)   The method of claim 12 further comprising, providing the electronic ink

data to a recognizer, receiving a recognition result therefrom including a text word alternate,

maintaining the text word alternate with the electronic ink object, and exposing an interface to the

application, the interface having an associated method that enables the application to obtain

information about the text word alternate.

28.   (original)   A computer-readable medium having computer-executable instructions

for performing the method of claim 12.

29.   (original)   A computer-readable medium having stored thereon a data structure,

comprising,

    a data field including electronic ink data;

    at least one interface for invoking functionality associated with the data structure, including

functionality for rendering a representation of the electronic ink data; and

    the functionality invoked via the interface by executable code hosting a document containing

the data structure, to render a representation of the electronic ink data relative to other information

contained in the document.

30.   (original)   The data structure of claim 29 further comprising, other functionality for

matching the appearance of the representation to the other information contained in the document.

7

In re Application of GEIDL et al.
Serial No. 09/909,416

31.   (original)   The data structure of claim 29 wherein the other information contained in

the document comprises text data, and further comprising, at least one other data field in the data

structure for maintaining adjustment information for adjusting the representation to match the text data,

and other functionality associated with the data structure for adjusting the representation based on the

adjustment information to match the text data.

32.   (original)   The data structure of claim 31 wherein the at least one other field

contains baseline data, and wherein the functionality adjusts the representation to match the text data

by evaluating the baseline information.

33.   (original)   The data structure of claim 31 wherein the at least one other field

contains midline data, and wherein the functionality adjusts the representation to match the text data by

evaluating the midline information.

34.   (original)   The data structure of claim 29 further comprising, at least one other data

field that maintains identifier information of another object.

35.   (original)   The data structure of claim 29 further comprising, at least one other data

field that maintains information related to normalization of the electronic ink data.

36.   (original)   The data structure of claim 29 further comprising, at least one other data

field that maintains information related to formatting the electronic ink data, and further comprising

8

In re Application of GEIDL et al.
Serial No. 09/909,416

other functionality associated with the data structure to enable the executable code to modify the

information related to formatting the electronic ink data.

37.   (original)   The data structure of claim 29 further comprising, at least one other data

field that maintains color information related to a color of the electronic ink data, and further

comprising other functionality associated with the data structure to enable the executable code to

modify the color information.

38.   (original)   The data structure of claim 29 further comprising, at least one other data

field that maintains size information related to a displayed size of the electronic ink data, and further

comprising other functionality associated with the data structure to enable the executable code to

modify the size information.

39.   (original)   The data structure of claim 29 further comprising, at least one other data

field that maintains recognition information related to recognition of the electronic ink data by a

recognition engine.

40.   (original)   The data structure of claim 39 wherein the at least one other field

contains recognition state information.

41.   (original)   The data structure of claim 39 wherein the at least one other field

contains a result from the recognition engine.

In re Application of GEIDL et al.
Serial No. 09/909,416

42.   (original)   The data structure of claim 41 wherein the result from the recognition

engine includes at least one candidate corresponding to the electronic ink data.

43.   (original)   The data structure of claim 42 further comprising other functionality

associated with the data structure to enable the executable code to obtain information about the at least

one candidate.

10